01/08729

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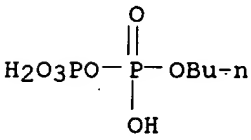
ACCESSION NUMBER: 1974:523954 CAPLUS
DOCUMENT NUMBER: 81:123954
TITLE: Thermal stability and antiseize properties of some phosphorus-containing lubricating oil additives
AUTHOR(S): Kharchenko, L. S.; Kupko, G. G.; Rykhlevskii, G. M.; Tordash, Yu. T.
CORPORATE SOURCE: USSR
SOURCE: Khim. Tekhnol. Topl. Masel (1974), (1), 46-8
CODEN: KTPMAG
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Mixed anhydrides of dithiophosphoric acid and its salts, contg. Sb and Si, were studied to det. their thermal stability and antiwear properties. An interdependence was established between some of their structural characteristics, such as valency of the central P atom, radical structure, presence of thione S and O, and thermal stability. The higher antiseize properties were provided by mixed anhydrides of dialkyl dithiophosphates and P-contg. acids with tri- and tetracoordinated P atom; the crit. loads of H3PO4 derivs. being somewhat higher than those of phosporous acid derivs.

IT **52811-47-9**
RL: USES (Uses)
(antiseize additives and thermal stabilizers, for lubricating oil)

RN 52811-47-9 CAPLUS
CN Diphosphoric acid, monobutyl ester (9CI) (CA INDEX NAME)



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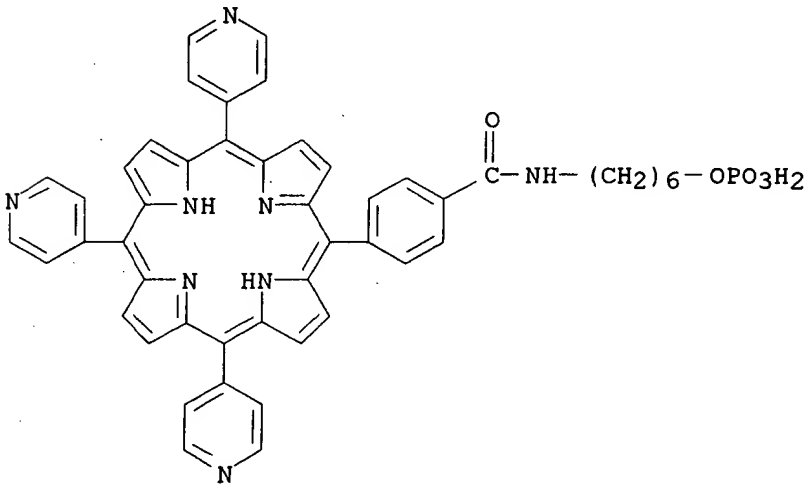
ACCESSION NUMBER: 1997:164802 CAPLUS
DOCUMENT NUMBER: 126:141410
TITLE: Site-Specific Photomodification of DNA by Porphyrin-Oligonucleotide Conjugates Synthesized via a Solid Phase H-Phosphonate Approach
AUTHOR(S): Li, Handong; Fedorova, Olga S.; Trumble, William R.; Fletcher, T. Rick; Czuchajowski, Leszek
CORPORATE SOURCE: Department of Chemistry and Department of Microbiology and Molecular Biology and Biochemistry, University of Idaho, Moscow, ID, 83843, USA
SOURCE: Bioconjugate Chem. (1997), 8(1), 49-56
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Meso-Tris(4-pyridyl)[[(.omega.-hydroxyhexamethylene)carbamoyl]phenyl]porphyrin was converted to its H-phosphonate deriv. and conjugated using solid phase synthesis with the 5'-hydroxyl group of deoxyribonucleotides d(TCTTCCCA) and d(T)12. These conjugates were transformed into their (N-methylpyridiniumyl)porphyrin analogs in the reaction with Me iodide. A 532 nm laser beam was utilized to photoactivate both types of the conjugates in the presence of the target 22-mer and 16-mer oligonucleotides. Photoactivation of porphyrin-oligonucleotide conjugates resulted in site-specific DNA modification characterized by a main reaction site size of .apprx.5 bases.

IT **186583-97-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(site-specific photomodification of DNA by porphyrin-oligonucleotide conjugates synthesized via solid phase H-phosphonate approach)

RN 186583-97-1 CAPLUS
CN Benzamide, N-[6-(phosphonooxy)hexyl]-4-(10,15,20-tri-4-pyridinyl-21H,23H-porphin-5-yl)- (9CI) (CA INDEX NAME)

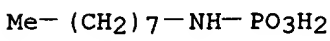


ACCESSION NUMBER: 1977:453513 CAPLUS
DOCUMENT NUMBER: 87:53513
TITLE: The synthesis of phosphoramidates from silylphosphites and azides
AUTHOR(S): Gibbs, Don E.
CORPORATE SOURCE: Salk Inst. Biol. Stud., San Diego, Calif., USA
SOURCE: Tetrahedron Lett. (1977), (8), 679-82
CODEN: TELEAY
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Condensation of silyl phosphites with azides gave phosphoramidates. E.g., (EtO)2POSiMe3 with PhN3 gave (EtO)2P(O)NHPh. 5'-Azido-5'-deoxythymidine with thymidine 3'-phosphite and MeC(:NSiMe3)OSiMe gave 82% thymidyl-(3'-5')-5'-amino-5'-deoxythymidine.

IT **63542-06-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 63542-06-3 CAPLUS
CN Phosphoramidic acid, octyl- (9CI) (CA INDEX NAME)



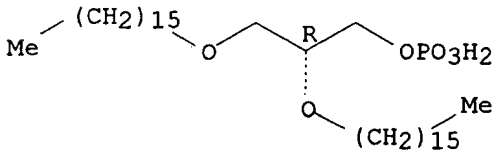
ACCESSION NUMBER: 1980:53762 CAPLUS
DOCUMENT NUMBER: 92:53762
TITLE: The influence of charge on bilayer membranes. Calorimetric investigations of phosphatidic acid bilayers
AUTHOR(S): Blume, Alfred; Eibl, Hansjoerg
CORPORATE SOURCE: Inst. Phys. Chem. II, Freiburg/Br., D-7800, Fed. Rep. Ger.
SOURCE: Biochim. Biophys. Acta (1979), 558(1), 13-21
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The pH dependence of the phase transition of dimyristoylphosphatidic acid and dihexadecylphosphatidic acid was investigated using differential scanning calorimetry. Varying the pH induced different degrees of ionization of the polar head group. The changes in transition temp. with pH as obsd. by calorimetry were in good agreement with those obtained by measuring the changes in light scattering. The obsd. max. of the transition temp. at pH 3.5 corresponded to a min. in the transition enthalpy vs. pH diagram. At this pH a particular stable bilayer phase was formed. Full protonation of phosphatidic acids led to suspensions of microcrystals. The transition enthalpy approached the value of the melting enthalpy of cryst. anhyd. phosphatidic acid. The decrease in the transition enthalpy at high pH values resulted from a change in the hydrocarbon chain interactions induced by the doubly charged head groups. The cooperativity of the transition varied with the degree of ionization of the head group, being lower for doubly charged phosphatidic acids.

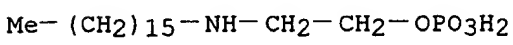
IT **36405-52-4**
RL: BIOL (Biological study)
(membrane bilayers, phase transition and transition enthalpy of, head group ionization effect on)

RN 36405-52-4 CAPLUS
CN 1-Propanol, 2,3-bis(hexadecyloxy)-, dihydrogen phosphate, (R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



ACCESSION NUMBER: 1998:750143 CAPLUS
DOCUMENT NUMBER: 130:126594
TITLE: Study on new amphoteric surfactants of phosphates I. Syntheses and properties
AUTHOR(S): Wei, Shaohua; Zhang, Zhuyong
CORPORATE SOURCE: Dep. Chem., Nanjing Normal Univ., 210097, Peop. Rep. China
SOURCE: Jingxi Huagong (1998), 15(5), 1-5
CODEN: JIHUFJ; ISSN: 1003-5214
PUBLISHER: Jingxi Huagong Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A series of new amphoteric surfactants (RNH2CH2CH2OP-OH) was prepd. from alkyl bromide, aminoethanol, and phosphorus pentoxide. These surfactants show zwitterionic characteristics at pH 4.5- 8.4. They had excellent surface properties (.gamma.CMC = 25.5 mN.cntdot.m-1, CMC = 1.51 x 10-3 mol.cntdot.L-1) and excellent foaming and wetting property over a wide pH range (6.apprx.10).
IT **115667-63-5P**
RL: NUU (Nonbiological use, unclassified); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(surfactants; prepn. and properties of)
RN 115667-63-5 CAPLUS
CN Ethanol, 2-(hexadecylamino)-, dihydrogen phosphate (ester) (9CI) (CA INDEX NAME)

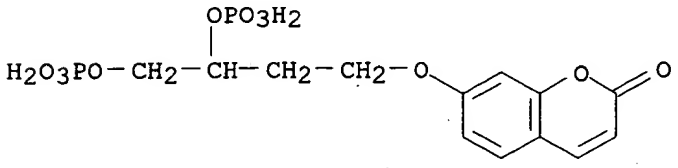


L19 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:859470 CAPLUS
DOCUMENT NUMBER: 134:174618
TITLE: A versatile periodate-coupled fluorogenic assay for hydrolytic enzymes
AUTHOR(S): Badalassi, Fabrizio; Wahler, Denis; Klein, Gerard; Crotti, Paolo; Reymond, Jean-Louis
CORPORATE SOURCE: Dipartimento di Chimica Bioorganica e Biofarmacia Universita di Pisa, Pisa, 56126, Italy
SOURCE: Angew. Chem., Int. Ed. (2000), 39(22), 4067-4070
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The development of new catalysts is being increasingly followed by using combinatorial and evolutionary methods. These approaches require the ability to assay large nos. of samples in parallel. Here, a new versatile fluorogenic assay for hydrolytic enzymes is reported. The assay couples product formation to the release of a fluorescent signal, achieved via periodate oxidn. and albumin-catalyzed .beta.-elimination, and uses non-activated, chiral substrates.

IT **326595-97-5**
RL: ARG (Analytical reagent use); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
(prepn. of substrates for a versatile periodate-coupled fluorogenic assay for hydrolytic enzymes)

RN 326595-97-5 CAPLUS
CN 2H-1-Benzopyran-2-one, 7-[3,4-bis(phosphonooxy)butoxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 41
REFERENCE(S):
(1) Beisson, F; Eur J Lipid Sci Technol 2000, P133 CAPLUS
(2) Beisson, F; J Lipid Res 1999, V40, P2313 CAPLUS
(5) Berkessel, A; Angew Chem Int Ed 1999, V38, P102 CAPLUS
(7) Chen, X; J Org Chem 1993, V58, P5528 CAPLUS
(8) Chini, M; Tetrahedron Lett 1994, V35, P433 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER: 1983:405425 CAPLUS
DOCUMENT NUMBER: 99:5425
TITLE: Synthesis of rac-3-benzoyl-1-deoxyceramide-1-phosphonic acid
AUTHOR(S): Bushnev, A. S.; Tazabekova, N. T.; Nikolaevskaya, I. V.; Zvonkova, E. N.; Evstigneeva, R. P.
CORPORATE SOURCE: M. V. Lomonosov Inst. Fine Chem. Technol., Moscow, USSR
SOURCE: Bioorg. Khim. (1983), 9(4), 553-5
CODEN: BIKHD7
DOCUMENT TYPE: Journal
LANGUAGE: Russian
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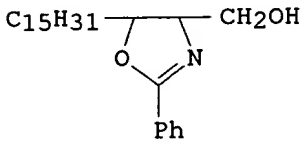

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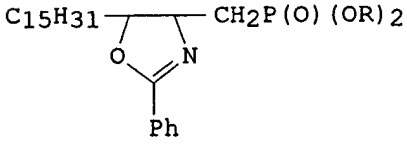
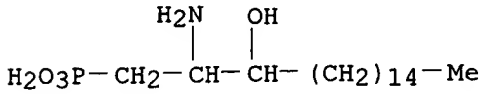


II

AB I was mesylated, treated with NaI, then with P(OR)3 to give II (R = Et, Bu), which was cleaved with H2SO4 to give C15H31CH(OBz)CH(NH2)CH2P(O)(OR)2 .1/2H2SO4, which was acylated with stearoyl chloride, then hydrolyzed in two steps to give (.+-.)-C15H31CH(OH)CH(NH2)CH2P(O)(OH)2.

IT **86091-99-8P**
RL: RCT (Reactant); PREP (Preparation)
(synthesis of)

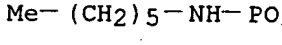
RN 86091-99-8 CAPLUS
CN Phosphonic acid, (2-amino-3-hydroxyoctadecyl)- (9CI) (CA INDEX NAME)



L35 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1971:471703 CAPLUS
DOCUMENT NUMBER: 75:71703
TITLE: Phosphorus-nitrogen compounds. 12. Phosphamidase studies. 2. N-alkylphosphoramidic acids
AUTHOR(S): Cates, Lindley A.
CORPORATE SOURCE: Coll. Pharm., Univ. Houston, Houston, Tex., USA
SOURCE: J. Med. Chem. (1971), 14(7), 647-9
CODEN: JMCMAR
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The N-alkylphosphoramidic acids, RPO(OH)2, were prepd. from the corresponding phosphoramidic dichlorides by alkaline hydrolysis and tested as substrates for bovine phosphamidase. They exhibited a relatively low order of reactivity towards the enzyme. The most active substrates were phosphorodiamides or phosphorotriamides.

IT **33876-47-0**
RL: RCT (Reactant)
(reaction of, with phosphoamidase)
RN 33876-47-0 CAPLUS
CN Phosphoramidic acid, hexyl- (8CI) (CA INDEX NAME)



ACCESSION NUMBER: 1992:221452 CAPLUS
DOCUMENT NUMBER: 116:221452
TITLE: Timolol in lipospheres
AUTHOR(S): Gasco, M. R.; Cavalli, R.; Carlotti, M. E.
CORPORATE SOURCE: Dip. Sci. Tecnol. Farm., Univ. Torino, Turin, 10135, Italy
SOURCE: Pharmazie (1992), 47(2), 119-21
CODEN: PHARAT; ISSN: 0031-7144
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Lipospheres carrying timolol (I) were obtained from microemulsions. They had lecithin and palmitic and decanoic acids as the main constituents. The sizes were between 300 and 400 nm and the amt. of I incorporated varied from 2.7 to 4.8% according to the microemulsion used. Compd. I was present in the lipospheres mainly as ion pairs in order to increase its lipophilicity. The difference found in the incorporation was principally due to the different lipophilicity of the ion pairs of I.

IT **3921-30-0**, Decyl phosphate
RL: BIOL (Biological study)
(timolol lipospheres contg., prepn. and stability of)

RN 3921-30-0 CAPLUS
CN Phosphoric acid, monodecyl ester (8CI, 9CI) (CA INDEX NAME)

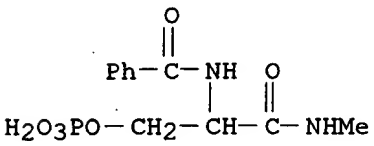
$H_2O_3PO-(CH_2)_9-Me$

ACCESSION NUMBER: 1972:34548 CAPLUS
DOCUMENT NUMBER: 76:34548
TITLE: Hydrolysis of phosphoric ester serine derivatives containing free amino or carboxylic groups
AUTHOR(S): Avaeva, S. M.; Sklyankina, V. A.; Kolesnikova, V. Yu.
CORPORATE SOURCE: USSR
SOURCE: Vestn. Mosk. Univ., Khim. (1971), 12(5), 627-8
CODEN: VMUKA5
DOCUMENT TYPE: Journal
LANGUAGE: Russian

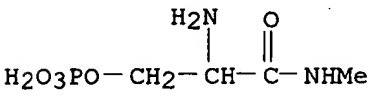
AB (HO)2P(O)OCH2CH(NH2)CONHMe (I), (HO)2P(O)OCH2CH(NHAc)CO2H (II), (HO)2P(O)OCH2CH(NH2)CO2H (III) and (HO)2P(O)OCH2CH(NHBz)CONHMe (IV) were hydrolyzed in M and 5.5M HClO4, in mild acid (pH 1-7), and mild alk. (pH 7-12.5) media at 85-100.degree.. Compds. with a free amino group [O-phosphoserine methylamide (I) and O-phosphoserine (III)] hydrolyzed at an increased rate at pH 4 whereas the compds. with the amino group acetylated [N-acetyl-O-phosphoserine (II) and N-benzoyl-O-phosphoserine methylamide (IV)] had no max. rate.

IT **14406-99-6 34965-63-4**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process)
(hydrolysis of, kinetics of)

RN 14406-99-6 CAPLUS
CN Benzamide, N-[2-(methylamino)-2-oxo-1-[(phosphonooxy)methyl]ethyl]- (9CI) (CA INDEX NAME)



RN 34965-63-4 CAPLUS
CN Propanamide, 2-amino-N-methyl-3-(phosphonooxy)- (9CI) (CA INDEX NAME)



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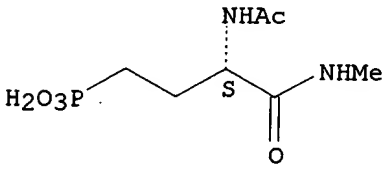
ACCESSION NUMBER: 1992:236128 CAPLUS
DOCUMENT NUMBER: 116:236128
TITLE: Synthesis of the simple peptide model Ac-Abu(PO3H2)-NHMe
AUTHOR(S): Valerio, Robert M.; Perich, John W.; Alewood, Paul F.; Tong, Glenn; Johns, R. B.
CORPORATE SOURCE: Sch. Chem., Univ. Melbourne, Parkville, 3052, Australia
SOURCE: Aust. J. Chem. (1992), 45(4), 777-84
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The simple model substrate Ac-L-Abu(PO3H2)-NHMe [Abu(PO3H2) = NHCH(CH2CH2PO3H2)CO] was prepd. by the use of the protected 4-(diethylphosphono)butanoic acid deriv. Boc-Abu(PO3Et2)-OH (Boc = Me3CO2C) in the Boc mode of soln. phase peptide synthesis. The protected peptide model Ac-Abu(PO3Et2)-NHMe was prepd. by initial reaction of the isobutoxycarbonyl mixed anhydride of Boc-Abu(PO3Et2)-OH with MeNH2 followed by cleavage of the Boc group from Boc-Abu(PO3Et2)-NHMe with 4 M HCl/dioxane and N-acetylation of H-Abu(PO3Et2)-NHMe.HCl with the isobutoxycarbonyl mixed anhydride of AcOH. Cleavage of the phosphonate Et groups was effected with 33% HBr/AcOH or 10% BrSiMe3/MeCN to give Ac-L-Abu(PO3H2)-NHMe in nearly quant. yield.

IT **141340-66-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 141340-66-1 CAPLUS
CN Phosphonic acid, [3-(acetylamino)-4-(methylamino)-4-oxobutyl]-, (S)-(9CI)
(CA INDEX NAME)

Absolute stereochemistry.



ACCESSION NUMBER: 1996:618920 CAPLUS
DOCUMENT NUMBER: 126:16188
TITLE: Synthesis, structure-activity relationships, and the effect of polyethylene glycol on inhibitors of phosphatidylinositol-specific phospholipase C from Bacillus cereus

AUTHOR(S): Ryan, Margret; Smith, Miles P.; Vinod, Thottumkara K.; Lau, Wai Leung; Keana, John F. W.; Griffith, O. Hayes

CORPORATE SOURCE: Department of Chemistry, University of Oregon, Eugene, OR, 97403-1229, USA

SOURCE: J. Med. Chem. (1996), 39(22), 4366-4376
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Substrate analog inhibitors of B. cereus phosphatidylinositol-specific phospholipase C (PI-PLC) were synthesized and screened for their suitability to map the active site region of the enzyme by protein crystallog. Analogs of the natural substrate, phosphatidylinositol (PI), were designed to examine the importance of the lipid portion and the inositol phosphate head group for binding to the enzyme. The synthetic compds. contained pentyl, hexyl, or hexanoyl and octyl lipid chains at the sn-1 and sn-2 positions of the glycerol backbone and phosphonoinositol, phosphonic acid, Me phosphonate, phosphatidic acid, or Me phosphate at the sn-3 position. The most hydrophobic compd., dioctyl Me phosphate, was also the best inhibitor with an IC50 of 12 .mu.M. In a series of dihexyl lipids, compds. with phosphonoinositol head groups inhibited more strongly than those that did not contain inositol but were otherwise identical. A short-chain lipid with a phosphonoinositol head group was found to be a competitive inhibitor and the most potent in this series with an IC50 of 18 .mu.M (Ki =14 .mu.M). Analogs with dihexyl chains were better inhibitors than those with dihexanoyl chains, presumably because the ether-linked lipids were more hydrophobic than the ester-linked lipids. No appreciable difference in inhibition was found between a phosphonoinositol lipid and the corresponding difluorophosphonoinositol lipid. Inositols and inositol derivs. that did not contain lipid moieties showed IC50 values .apprx.3 orders of magnitude above those of the short-chain lipids. In this group, glucosaminyl(.alpha.1.fwdarw.6)-D-myo-inositol inhibited more strongly than did myo-inositol, which in turn was a better inhibitor than inositol phosphate. The addn. of polyethylene glycol (PEG-600) resulted in a marked decrease in inhibition by the short-chain lipids, but had little effect on the water-sol. head group analogs. This was accounted for in terms of solubilization of the amphipathic inhibitors by PEG. Since PEG is required in crystn., these data indicate that the best strategy for obtaining enzyme inhibitor complexes is to start by cocrystg. PI-PLC with the head group analogs. The next step is to synthetically add the shortest possible hydrophobic moieties to the analogs and cocrystallize these with the enzyme. This strategy may be applicable to other lipolytic enzymes.

IT **183999-25-9**

RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(structure-activity relations of inhibitors of phosphatidylinositol-specific phospholipase C from Bacillus cereus)

RN 183999-25-9 CAPLUS

CN Phosphonic acid, [3,4-bis(hexyloxy)butyl]- (9CI) (CA INDEX NAME)